

# **Commonwealth Edison Company's Quarterly Smart Grid Test Bed Report**

**May 14, 2014**

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## **Introduction**

This report summarizes the test bed activities, customers, discoveries, and other information deemed mutually relevant from January 1, 2014, through March 31, 2014 as described in subsection (i) of Section 16-108.8 of the Public Utilities Act (“Act”).

## **ComEd Quarterly Smart Grid Test Bed Report**

ComEd currently has two active Test Bed demonstration projects. ComEd completed installation of 12 line monitoring devices associated with the Sentient Energy Test Bed demonstration project, and plans to install 3 additional devices during the second quarter.

Additionally during the first quarter of 2014, ComEd received and approved one new Test Bed Application from GlidePath Power, LLC. The project includes deployment of three 20MW energy storage facilities in ComEd’s territory and demonstration of various grid support capabilities.

A description of Sentient Energy’s and GlidePath Power, LLC’s technologies and the current status of the demonstrations are included below.

**Sentient Energy:** [www.sentient-energy.com](http://www.sentient-energy.com)

Sentient Energy develops a line monitoring device that captures critical operating characteristics and event data from multiple points on the distribution system. These monitoring locations are made up of sensors and embedded applications that gather data related to real-time operating current, conductor temperature and voltage characteristics. At the heart of this line monitor is a high-resolution waveform capture

capability that detects faults and other network “anomalies”. All data is sent wirelessly back to the utility in near-real time. Data is used for real-time control as well as planning, engineering and power quality to enhance network reliability.

*Status:* ComEd and Sentient Energy completed installation of 12 devices in ComEd’s Southern Region to demonstrate voltage and current sensing capabilities, including fault current indication. ComEd plans to install three additional devices within the footprint of its Silver Springs mesh radio network test environment to demonstrate the ability of the devices to interface with the wireless communications network that ComEd is currently deploying for smart meter and distribution automation; as well as various advanced power quality measurement capabilities of the devices. ComEd anticipates that these additional devices will be available from Sentient Energy in the third quarter of 2014.

#### **GlidePath Power, LLC:**

GlidePath Power, LLC is currently developing three 20MW battery storage projects within the ComEd footprint of PJM. These projects are intended to participate in the PJM regulation market. The projects are located in McHenry, West Chicago, and Joliet, Illinois and will begin construction in late 2014.

*Status:* ComEd recently approved GlidePath’s Test Bed Application and the two parties are in the process of developing a detailed scope of work and project agreement, including project objectives.